

## CLAIMS

### WHAT IS CLAIMED IS:

1. An apparatus for migration and conversion of software code from any source platform to any target platform that migrates and/or converts any source application working on any platform into a format of any target platform comprises of:  
an inputting means for accepting the entire source code of sample part in ASCII to analyse the business logic of the source application, obtaining UI (User Interface)/GUI (Graphical User Interface) details of the source and target application, also receiving validation schemes of source front-end interface, obtaining the definitions of the target back-end system, the existing test scripts to facilitate the quality control phase of the generated code, the source code entry points to business processes, target environment specification or definitions which includes target platform(s), languages to be used, target database, coding standards, target architecture and framework, third party components, existing applications which have to be plugged with target application, and sample code for the application working in the target environment (if available);  
an analysing means for analysing the source schemes provided by the client to create target schemes, analysing the business logic in the source application to create workflow diagrams that represent the source application processes, identifying

the code segments in the source application and analysing the target to generate the target architecture and the technology associated with it;

a setting up means for generating custom knowledge base where the existing KB is reviewed for particular migration and in case of no such KB exist, a custom KB is created;

a processing means for conversion of source code in format of target specification wherein the complete source code is passed through a knowledge engine on the basis of iteration and during this time the knowledge engine remains coupled to the knowledge base for conversion of source code in format of target specifications; and after each iteration the knowledge base is updated which leads to speedy and better conversion of source code as the Custom KB has now more structured information of source platform and source application with respect to target platform and target specifications; and

a documenting means for generation of reports during review of the process stage and a summary report after the end of the conversion process, which consists of the code that is not converted automatically, this unconverted code is then converted manually at applicants resource center.

2. The apparatus in claim 1 wherein a 'Knowledge Base Database (KB)' is provided for understanding the source application and source platform, as well as the target specifications and target platform.

3. The apparatus in claim 1, wherein a 'Knowledge Engine (KE)' is provided to extract the business logic and database (back-end) schema of the source application systematically and logically and to convert it into the format specified for the target application.
4. The apparatus in claim 1, wherein 'Knowledge Database' is updated after each iteration by 'KE' to provide wider knowledge of source application during the conversion process, leading to speedy and better future conversions.
5. The apparatus in claim 1, wherein a report is generated after conversion, which consist of, the unconverted source code by the automatic migration process.
6. The apparatus in claim 1, wherein any target platform as claimed in any of the preceding claims that learns from the iterations completed by 'Knowledge Database' which increases the rate of automatic migration in next iteration.